

Landscape Message: Apr 5, 2019

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Issue: 2

UMass Extension's Landscape Message is an educational newsletter intended to inform and guide Massachusetts Green Industry professionals in the management of our collective landscape. Detailed reports from scouts and Extension specialists on growing conditions, pest activity, and cultural practices for the management of woody ornamentals, trees, and turf are regular features. The following issue has been updated to provide timely management information and the latest regional news and environmental data.

The Landscape Message will be updated weekly in April, May and June. The next message will be posted on April 12. To receive immediate notification when the next Landscape

Message update is posted, be sure to join our e-mail list (/landscape/email-list).

To read individual sections of the message, click on the section headings below to expand the content:

Scouting Information by Region

- Environmental Data

The following data was collected on or about April 3, 2019. Total accumulated growing degree days (GDD) represent the heating units above a 50° F baseline temperature collected via our instruments for the 2019 calendar year. This information is intended for use as a guide for monitoring the developmental stages of pests in your location and planning management strategies accordingly.

MA Region/Location	GDD		Soil Temp (°F at 4" depth)		Precipitation	Time/Date of				
	2-Week Gain	2019 Total	Sun	Shade	(2-Week Gain)	Readings				
САРЕ	0.5	1.5	48	40	1.77	12:00 PM 4/3				
SOUTHEAST	3.0	4.5	43	41	1.90	10:00 AM 4/3				
NORTH SHORE	8.5	9.5	42	37	0.66	9:45 AM 4/3				
EAST	8.5	12.5	51	41	1.47	2:00 PM 4/3				
METRO	7.0	7.0	45	41	0.94	4:30 PM 4/3				
CENTRAL	5.5	5.5	40	40	0.92	5:10 PM 4/3				
PIONEER VALLEY	4.5	7.5	47	42	1.21	1:00 PM 4/3				
BERKSHIRES	4.0	9.0	40	38	0.86	9:00 AM 4/3				
AVERAGE	5.0	7.0	45	40	1.22	12:00 PM 4/3				
n/a = information not available										

- <u>Phenology</u>

INDICATOR PLANTS - STAGES OF FLOWERING (BEGIN, BEGIN/FULL, FULL, FULL/END, END)

PLANT NAME (BOTANIC/ COMMON)	CAPE	S.E.	N.S.	EAST	METRO W.	CENT.	P.V.	BERK.		
<i>Pieris japonica</i> (Japanese Pieris)	Begin	*	*	Begin	*	*	*	*		
<i>Cornus mas</i> (Cornelian cherry dogwood)	*	Begin/Full	*	Begin	Begin	Begin	Begin	Begin		
<i>Acer rubrum</i> (red maple)	*	Begin/Full	*	Begin	*	*	*	*		
Acer saccharinum (silver maple)	Begin	End	Begin/Full	Begin	*	Begin/Full	Begin/Full	Begin		
<i>Hamamelis mollis</i> (Chinese witch hazel)	Full/End	Full	Full	Full/End	Full/End	Full/End	Full	Full		
<i>Hamamelis</i> x <i>intermedia</i> (witch hazel hybrids)	Full/End	Full	Full	Full/End	Full	Full	Full	Full		
* = no activity to report/information not available										

Regional Notes

- Cape Cod Region (Barnstable)

General Conditions: The average temperature over the last two weeks was 41 °F with a high of 59 °F on March 31 and a low of 21 °F on April 2. The period has been mostly dry with only two significant precipitation events, March 22 (~1") and April 3 (~0.75"), allowing soils to dry considerably between the events. Persistent winds have kept it chilly in spite of the bright sun. *Galanthus* spp. are in full bloom, some *Crocus*, and the occasional *Narcissus*. Peepers could be heard the last couple of evenings.

Pests/Problems: There is little to report but occasional winter injury seen on broadleaf evergreens.

Southeast Region (New Bedford)

General Conditions: Temperatures began to rise in late March, reaching into the low 60's for the last weekend of the month. Winds have been very high making the 40- and 50-degree day temperatures feel much cooler than they are. We entered April with a nice rain storm and cooler temperatures. Night temperatures continue to drop into the teens and low 20's. Buds have begun to swell and break. *Cornus officinalis* is in full bloom while *Lindera obtusiloba* and *Parotia persicaria* are beginning to bloom. Mini *Iris*, Mini daffodils, and *Crocus* have popped with this past weekend's warmer weather while *Galanthus* spp. continue to bloom. Hellebores began to bloom this week while *Magnolia* buds continue to swell. The *Hamamelis* hybrids are still blooming away. Peepers can be heard in late afternoon and evening, surely marking a sign of spring.

Pests/Problems: Snow mold has been spotted in some turf areas. White pine branches continue to break with the high spring winds and wind damage is showing up on *llex* spp. and *Rhododendron* spp. Damage on *Hydrangea macrophylla* has been noted due to colder temperatures. Lastly, ticks are active.

- North Shore (Beverly)

General Conditions: The last few days of March were unseasonably warm with day temperatures in the high 50s to mid-60s and night temperatures in the mid-40s. During the last 3 days of March, we accumulated 8.5 growing degree days, adding to a total of 9.5 growing degree days since the beginning of January this year. A cold front brought lower temperatures into the region resulting in the first few days of April being colder than normal. High temperatures during the day were in the low to mid-40s and night temperatures were in the mid-30s. We have experienced a number of days of precipitation making the soils very moist and not suitable to be worked until they dry out. Although the last few days have been unseasonably cold, there are signs of spring in the landscape with some plants blooming or starting to bloom. Woody plants seen in bloom or beginning to bloom include, goat willow (*Salix caprea*), February Daphne (*Daphne mezereum*), Chinese witch hazel (*Hamamelis mollis*), 'Arnold Promise' witch hazel (*Hamamelis x intermedia*), American filbert (*Corylus americana*) and *Viburnum farreri.* Early spring flowering bulbs seen in bloom include: Siberian squill (*Scilla siberica*), Tommy Crocus (*Crocus tommasinianus*), snowdrops (*Galanthus* spp.) and hellebores (*Helleborus orientalis*).

Pests/Problems: Viburnum leaf beetle eggs were observed on twigs of susceptible Viburnum cultivars. Viburnum leaf beetle can be managed by the pruning and removing of egg-infested twigs by mid-April. Due to an infestation of tulip tree scale on Magnolia last year at Long Hill, tulip trees and Magnolia trees have been sprayed with dormant oil. Overwintering second instar nymphs of tulip tree scale can be managed with an application of dormant horticultural oil made according to label directions in early spring before new growth occurs. Fungal leaf spots were observed on mountain laurel (*Kalmia latifolia*). Management practices for leaf leaves during the winter months and thinning mature shrubs for better air circulation. There

was no significant damage to plants by deer and other nuisance wildlife observed in the landscape.

- <u>East Region (Boston)</u>

General Conditions: Low temperatures over the last 2 weeks ranged from 23°F to 42°F, averaging 31°F. High temperatures ranged from 41°F to 68°F, averaging 52°F. We reached a high of 68°F on both March 30 and 31. April began with lows in the 20's and unseasonably cool days. The edge of a nor'easter quickly blew through in the early morning of April 3, delivering 0.4 inches of precipitation. Prior to this, we gained 1.07 inches of precipitation over the past 2 weeks, of which 0.88 fell on March 22. We gained 8.5 GDDs for a total of 12.5 so far this year. In 2018 at this time we had accumulated 33.5 GDD's. Despite the increased day length, cool temperatures have contributed to the landscape remaining rather stagnant. Winter aconite (*Eranthus hyemalis*), snowdrops (*Galanthus nivalis*) and Crocus (*Crocus* spp.) continue to bloom. *Betula* spp. (birch), *Corylus* spp. (filbert) and *Salix* spp. (willow) are forming catkins. Shrubs in bloom include *Cornus officianalis* (Japanese cornelian cherry), *Daphne* mezereum forma alba (white February Daphne), Erica carnea (heath), Jasminum nudiflorum (winter jasmine), Lindera obtusiloba (Japanese spicebush) and Lonicera x purpusii (purpus or "winter beauty" honeysuckle). Many cultivars of witch hazel (Hamamelis x intermedia, ie. H. japonica x H. mollis) continue to flower. Magnolia sprengeri (Sprenger's Magnolia) and Magnolia zenii (Zen Magnolia) have just begun to open.

Pests/Problems: Winter annuals continue to thrive in mulched beds. *Allium vineale* (wild garlic) is abundant and *Alliaria petiolata* (garlic mustard) rosettes continue to appear. *Senecio vulgaris* (common groundsel) and *Cardamine hirsuta* (hairy bittercress) are flowering in sunny locations. Now is a good time to scout for and remove Viburnum leaf beetle (*Pyrrhalta viburni*) and gypsy moth (*Lymantria dispar*) egg masses.

- Metro West (Acton)

General Conditions: Spring arrived just two weeks ago and brought with it weather that has been pretty typical for spring - warm and cool temperatures, snow, wind, and rain. A light dusting of snow was recorded on the morning of the 23rd and is in the forecast for this evening, April 2nd. High temperatures of 68°F and 70°F were recorded on the 30th and 31st, respectively. Low temperatures of 19°F and 18°F were recorded on the 26th and 27th respectively. Wind gusts upwards of 13 to 14 mph have been recorded on several days. Average rainfall for the month of March is 4.83" and the total for this March is 2.81". Despite the rain and warm temperatures, there are pockets of snow here and there. In bloom at this time are: *Adonis amurensis* (Adonis), *Cornus mas* (Cornelian cherry dogwood), *C. officinalis* (Japanese Cornelian cherry dogwood), *Crocus* spp., *Galanthus nivalis* (snowdrop), *Hamamelis* x *intermedia* cultivars (Asian witch hazels), *Helleborus niger* (Christmas rose), *Petasites japonicus* (Japanese butterbur), and *Symplocarpus foetidus* (skunk cabbage). Other signs of spring observed in the landscape are: buds are swelling on *Acer rubrum* (red maple), *A. saccharinum* (silver maple), *Forsythia* spp., *Fothergilla* spp., *Lindera benzoin* (spicebush), and *Viburnum* spp.;

the sounds of peepers being heard in the early evening hours; street sweepers are out doing their thing; and crews are top dressing beds with new mulch.

Pests/Problems: Winter and storm debris cleanup has begun in earnest now that the snow has melted and the woody debris is accessible. Despite these efforts, the landscape continues to be a mess and is littered with large and small woody debris that has yet to be cleaned up from the winter storms and strong winds. Rodent and deer damage continues and ticks are active.

- <u>Central Region (Boylston)</u>

General Conditions: After some fits and starts, it certainly feels like spring has finally arrived. A minor snowstorm brought about ³/₄" of precipitation before quickly melting on the 23rd. March ended with two days of high temperatures well into the 60's. A variety of plants began to flower or continued flowering over the last two weeks. Of note, *Scilla siberica* (Siberian squill) and *Scilla lucilae* (glory of the snow) have poked up and started flowering on south facing slopes and along stone walls. *Iris reticulata* (reticulated Iris), *Eranthis hyemalis* (winter aconite) and *Crocus tommasinianus* (Crocus) are fully open and look wonderful this early in the season. Witch hazels are still holding strong.

Pests/Problems: The most common landscape problems at the moment are the typical winter damage we see this time of year. *Ilex opaca* (American holly) is showing a lot of leaf burn, even in protected areas, oddly *Arctostaphylos uva-ursi* (bearberry) sustained considerable winter burn this winter, perhaps due to the incredible amount of rain we saw in fall. Bearberry in particular does not deal well with poorly drained soils, and I suspect waterlogged soil through winter played a role in the damage we're seeing. We have observed a substantial amount of what appears to be Phytophthora on *Rhododendron catawbiense* and associated hybrids and cultivars this winter. Within the last two weeks, otherwise healthy shrubs have revealed anywhere from 30%-90% dieback. Deer browse continues to be a major issue.

- Pioneer Valley Region (Amherst)

General Conditions: A mix of mild and cold temperatures with a few rain showers characterized this past reporting period. Typical spring winds have been very active in the Pioneer Valley. Buds are swelling but we're still several weeks away from leaf out. Overall, we're in a typical early April "holding period" before the spring becomes firmly established. Surface soils have thawed and soil temperatures are now in the 40s, but subsurface soils remain frozen, especially in heavily shaded settings. Scattered patches of snow are still lingering. Maple sugaring season is winding down and reports appear to indicate this season won't be remembered as particularly good or bad. The numerous sugar shacks, primarily in the western valley hill towns, continue the New England tradition of maple syrup production.

Pests/Problems: Continue to prune and discard blighted shoots and branches from deciduous and evergreen trees and shrubs. Now is a good time to remove these blighted plant parts before weather conditions improve and pathogens become active again. It may

still be too early to judge the fate of Rhododendron and azalea shrubs. Leaf curling is a natural adaptation against winter desiccation and plants that appear injured may return to normal form as conditions improve. While *Phytophthora* is a common root rot pathogen of Rhododendron and azalea, it's unlikely that plants that were healthy in years past suddenly succumbed to infection. Phytophthora root rot is far more common on recent transplants that were harboring the pathogen upon purchase. Waterlogging of the roots from the excessive rain last season is a more likely culprit at sites with heavy soils and poor drainage.

- Berkshire Region (Great Barrington)

General Conditions: In the past two weeks, we've received 0.86 inches of precipitation which includes 1.8 inches of snow on March 22. Year to date precipitation is 8.72 inches, which is less than the norm of 9.31 inches. Despite the seemingly dry conditions, soils remain quite wet and are not yet workable. Snow can still be seen in shaded areas. Temperatures have begun to approach normal or slightly exceed the norm for most days during the past two weeks. The high temperature occurred on March 30, registering 67°F. The low was 18°F on March 26 and 27. Slow greening of lawns is occurring but for the most part turfgrass is still dormant and brown. Snowdrops (*Galathus nivalis*), species crocus (*Crocus tommasinianus, C. chrysanthus*), and winter aconite (*Eranthis hyemalis*) continue to bloom.

Pests/Problems: Other than on indoor plants, no active plant pests were observed during scouting. However, egg masses of Eastern tent caterpillar are evident. This is a good time to prune off twigs of flowering cherry and crabapple encircled with the black-brown and shiny egg masses of Eastern tent caterpillar. Scouting the landscape for gypsy moth egg masses is also advised at this time. The galls of black knot disease are quite evident now while Prunus species are leafless. This is a good time to scout *Prunus* species for black knot and prune out infected branches. At present, the most noticeable issue in the landscape is damage to plant materials as a result of browsing by deer, rabbits, and woodchucks as well as gnawing by voles.

- Regional Scouting Credits

- CAPE COD REGION Russell Norton, Horticulture and Agriculture Educator with Cape Cod Cooperative Extension, reporting from Barnstable.
- SOUTHEAST REGION Kristin McCullin, Horticulturist reporting from <u>Haskell Public Gardens</u> (<u>http://www.thetrustees.org/places-to-visit/south-of-boston/haskell-public-gardens.html</u>), New Bedford.
- NORTH SHORE REGION Geoffrey Njue, Green Industry Specialist, UMass Extension, reporting from the <u>Long</u> <u>Hill Reservation (http://www.thetrustees.org/places-to-visit/north-shore/long-hill.html)</u>, Beverly.
- EAST REGION Kit Ganshaw & Sue Pfeiffer, Horticulturists, reporting from the <u>Arnold Arboretum</u> (<u>https://www.arboretum.harvard.edu/</u>), Jamaica Plain.
- *METRO WEST REGION Julie Coop, Forester, Massachusetts Department of Conservation & Recreation, reporting from Acton.*

- CENTRAL REGION Mark Richardson, Director of Horticulture reporting from <u>Tower Hill Botanic Garden</u> (<u>https://www.towerhillbg.org/</u>), Boylston.
- PIONEER VALLEY REGION Nick Brazee, Plant Pathologist, UMass Extension Plant Diagnostic Lab, reporting from UMass Amherst.
- BERKSHIRE REGION Ron Kujawski, Horticultural Consultant, reporting from Great Barrington.

Woody Ornamentals

- <u>Diseases</u>

No report this week.

- Insects

Woody ornamental insect and non-insect arthropod pests to consider, *a selected few*:

 Emerald Ash Borer: (Agrilus planipennis, EAB) The Massachusetts DCR Forest Health Program has reported finding infestations in 12 new communities in 2019 of Emerald Ash Borer (EAB) in the towns of Alford, Stockbridge, Hampden, Southwick, East Longmeadow, Monson, Wales, Brimfield, Spencer, Ayer, Groton, and Townsend. For a state map showing current detections as well as New England-wide quarantine areas, go to https://www.mass.gov/guides/emerald-ash-borer-in-massachusetts (https://www.mass.gov/guides/emerald-ash-borer-in-massachusetts). For more detailed info on the Emerald Ash Borer, including life cycle, images of damage, and management strategies, go to UMass Extension's fact sheet at https://ag.umass.edu/landscape/factsheets/emerald-ash-borer (/landscape/fact-sheets/emerald-ash-borer). To report a suspected find of this invasive insect, go to https://massnrc.org/pests/eabreport.htm (https://massnrc.org/pests/eabreport.htm).

This wood-boring beetle readily attacks ash (*Fraxinus* spp.) including white, green, and black ash and has also been found developing in white fringe tree (*Chionanthus virginicus*) and most recently, has been reported in cultivated olive (*Olea europaea*). Adult insects of this species will not be present at this time of year. Signs of an EAB infested tree may include (at this time) D-shaped exit holes in the bark (from adult emergence in previous years), "blonding" or lighter coloration of the ash bark from woodpecker feeding (chipping away of the bark as they search for larvae beneath), and serpentine galleries visible through splits in the bark, from larval feeding beneath. Positive identification of an EAB-infested tree may not be possible with these signs individually on their own.

• Winter Moth: (*Operophtera brumata*) The eggs of this insect, if they can be found, were laid by the females who emerged in November of 2018 and were active through the winter months (mainly November through December when temperatures are above freezing). Eggs are currently present in the landscape and hidden in cracks and crevices of bark or beneath lichen on host plants such as oak, maple, apple, blueberry, crabapple, etc. Eggs are tiny and green when first laid, but quickly turn a red-orange color soon after. At this time, anyone monitoring winter moth eggs will most likely see that they are

orange in color. As the egg develops, it will turn a bright blue color, shortly prior to egg hatch. For more information about the life cycle and management of winter moth, please visit thisfact sheet: Winter Moth Identification and Management <u>https://ag.umass.edu/landscape/fact-sheets/winter-moth-identification-management</u> <u>(/landscape/fact-sheets/winter-moth-identification-management)</u>

Winter moth is a non-native insect that was identified in Massachusetts for the first time in 2003 following persistent reports of defoliation in eastern areas of the state such as Cape Anne and on the North Shore near Cohasset, Hingham, and Rockland on the South Shore in the late 1990's. For more detailed information about the history of this insect pest in North America and Massachusetts, please visit this fact sheet: Winter Moth in Massachusetts: History and Biological Control

https://https://ag.umass.edu/landscape/fact-sheets/winter-moth-identificationmanagement (https://https://ag.umass.edu/landscape/fact-sheets/winter-mothidentification-management)

• **Gypsy Moth:**(*Lymantria dispar*) Egg masses laid by female moths in 2018 can be seen at this time. This is the stage of the insect that overwinters. Egg masses are "fuzzy" or hairy and brownish-tan in color. Each egg mass can hold up to 500-1000 eggs. These masses may be found on host plant trunks and branches such as oak (favored), maple, birch, poplar, and many others, but are also laid on inanimate objects including the surfaces of homes, outdoor furniture, camping equipment, firewood piles, etc. This may make the accidental movement of gypsy moth egg masses possible.

Egg hatch for this insect is also not yet upon us, and occurs after winter moth egg hatch. Gypsy moth egg hatch typically occurs between 90 -100 growing degree days, using a base of 50°F and average temperatures. This is usually around the first week in May in Massachusetts, but variations in temperature may lead to early egg hatch in the last week in April. This can also coincide with serviceberry (*Amelanchier*) bloom. After egg hatch occurs, groups of tiny gypsy moth caterpillars may remain on their egg mass just before crawling to the canopy of their host plant, where they can disperse using a technique known as "ballooning". Ballooning occurs when very young caterpillars spin a silken thread and catch the wind to blow onto a new host plant once the thread breaks. This method of dispersal can lead to host plants becoming defoliated that previously did not have egg masses directly on them, however egg masses may be present on nearby oaks, for example, and provide a local population of caterpillars.

Now (until before the last week in April) is a great time to scout the landscape and count the number of gypsy moth egg masses present not only on valuable landscape specimens that are hosts for this insect, but on nearby forested hosts such as oak which might provide sources of ballooning caterpillars. Egg mass counts can help us make decisions regarding whether or not to manage for this insect. Some individuals also use this opportunity to scrape egg masses into a container of soapy water, although this is time consuming and some egg masses will be missed.

• **Asian Longhorned Beetle:** (*Anoplophora glabripennis*, ALB) Look for signs of an ALB infestation which include perfectly round exit holes (about the size of a dime), shallow oval or round scars in the bark where a female has chewed an egg site, or sawdust-like frass (excrement) on the ground nearby host trees or caught in between branches. These particular signs of damage from the beetle may be more visible at this time of year, when host trees such as maples are leafless. Be advised that other, native insects may create perfectly round exit holes or sawdust-like frass which can be confused with signs of ALB activity.

The regulated area for Asian longhorned beetle is 110 miles² encompassing Worcester, Shrewsbury, Boylston, West Boylston, and parts of Holden and Auburn. If you believe you have seen damage caused by this insect, such as exit holes or egg sites, on susceptible host trees like maple, please call the Asian Longhorned Beetle Eradication Program office in Worcester, MA at **508-852-8090** or **toll free at 1-866-702-9938**. Adult insects of this species will not be present at this time of year.

To report an Asian longhorned beetle find online or compare it to common insect look-alikes, visit: <u>http://massnrc.org/pests/albreport.aspx</u> (<u>http://massnrc.org/pests/albreport.aspx</u>) or <u>https://www.aphis.usda.gov/pests-</u> <u>diseases/alb/report (https://www.aphis.usda.gov/pests-diseases/alb/report)</u>

Concerned that you may have found an invasive insect or suspicious damage caused by one? Need to report a pest sighting? If so, please visit the Massachusetts Introduced Pests Outreach Project: <u>http://massnrc.org/pests/pestreports.htm</u> (<u>http://massnrc.org/pests/pestreports.htm</u>).

A note about **Tick Awareness:** deer ticks (*Ixodes scapularis*), the American dog tick (*Dermacentor variabilis*), and the lone star tick (*Amblyomma americanum*) are all found throughout Massachusetts. Each can carry their own complement of diseases. Anyone working in tick habitats (wood-line areas, forested areas, and landscaped areas with ground cover) should check themselves regularly for ticks while practicing preventative measures. Have a tick and need it tested? Visit the web page of the UMass Laboratory of Medical Zoology (<u>www.tickdiseases.org (http://www.tickdiseases.org/</u>)) and click on the red **Test a Tick** button for more information.

Reported by Tawny Simisky, Extension Entomologist, UMass Extension Landscape, Nursery, & Urban Forestry Program

- Plant of the Week

(/sites/ag.umass.edu/files/pest-alerts/images/content/dsc_3318.jpg) (/sites/ag.umass.edu/files/pest-alerts/images/content/dsc_3319.jpg) **Plant of the week:** *llex glabra*, inkberry

Ilex glabra is native to the coastal plain of eastern North America. This broadleaved evergreen has a rounded, upright form but can become leggy with age. Inkberries are dioecious, meaning there are separate male and female plants. A male pollinator is needed for female



plants to produce the berry-like drupes that give the plant its common name. Plants have green-white flowers in spring which are not ornamental. Leaves are elliptical, glossy dark green. Leaves usually have two notches near the apex. Cultivars, such as 'Compacta' and 'Shamrock', can have more compact, less leggy form than the species.

Root suckers need pruned if spreading is not wanted. Ilex glabra is a good choice for shrub borders, foundation plantings, rain gardens, or in wet sites. Leaf burn can be a problem in exposed locations during winter. Plants can suffer from chlorosis in high pH soils. Plants are best grown in medium to wet soil in full sun to part shade with best performance in an acidic soil in full sun, but are also tolerant of shade.

Report by Mandy Bayer, Extension Assistant Professor of Sustainable Landscape Horticulture, UMass Stockbridge School of Agriculture

Additional Resources

To receive immediate notification when the next Landscape Message update is posted, be sure to join our e-mail list (/landscape/email-list) and follow us on Facebook (http://www.facebook.com/pages/UMass-Extension-Landscape-Nursery-and-Urban-Forestry/519809748159819) and Twitter (https://twitter.com/umasslandscape).

For a complete listing of upcoming events, see our <u>Upcoming Educational Events page</u> <u>(/landscape/upcoming-events)</u>.

For commercial growers of greenhouse crops and flowers - Check out UMass Extension's <u>Greenhouse Update (http://negreenhouseupdate.info/)</u> website

For professional turf managers - <u>Check out Turf Management Updates (/turf/management-updates)</u>

For home gardeners and garden retailers - Check out <u>home lawn and garden resources</u> (/resources/home-lawn-garden). UMass Extension also has a Twitter feed that provides timely, daily gardening tips, sunrise and sunset times to home gardeners, see <u>https://twitter.com/UMassGardenClip (https://twitter.com/UMassGardenClip)</u>

Diagnostic Services

A UMass Laboratory Diagnoses Landscape and Turf Problems - The UMass Extension Plant Diagnostic Lab is available to serve commercial landscape contractors, turf managers, arborists, nurseries and other green industry professionals. It provides woody plant and turf disease analysis, woody plant and turf insect identification, turfgrass identification, weed identification, and offers a report of pest management strategies that are research based, economically sound and

environmentally appropriate for the situation. Accurate diagnosis for a turf or landscape problem can often eliminate or reduce the need for pesticide use. For sampling procedures, detailed submission instructions and a list of fees, see <u>Plant Diagnostics Laboratory (/services/plant-diagnostics-laboratory)</u>

Soil and Plant Nutrient Testing - The University of Massachusetts Soil and Plant Nutrient Testing Laboratory is located on the campus of The University of Massachusetts at Amherst. Testing services are available to all. The function of the Soil and Plant Nutrient Testing Laboratory is to provide test results and recommendations that lead to the wise and economical use of soils and soil amendments. For complete information, visit the <u>UMass Soil and Plant Nutrient Testing</u> <u>Laboratory (/services/soil-plant-nutrient-testing-laboratory)</u> web site. Alternatively, call the lab at (413) 545-2311.

Ticks are active at this time! Remember to take appropriate precautions when working and playing outdoors, and conduct daily tick checks. UMass tests ticks for the presence of Lyme disease and other disease pathogens. Learn more (/services/tick-borne-disease-diagnostics)

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